

Serial No. 10/014,696

Atty. Docket No. 13DV-13961

### **REMARKS**

The Examiner has rejected claims 1-10 under 35 U.S.C. § 103(a) as being unpatentable over "Applicant's Admitted Prior Art." This ground of rejection is respectfully traversed.

Independent claims 1, 3, 5 and 7 all recite a method of repairing a turbine nozzle segment that includes 1) separating a band from a vane or vanes, 2) providing a newly manufactured replacement band having one or more vane stubs extending from a flowpath surface, and 3) welding the newly manufactured replacement band to the vane or vanes.

The admitted prior art relied on by the Examiner in rejecting the claims is described in paragraph 0004 on page 2 of the present application. This passage describes two repair processes for nozzle segments. The first repair process is an airfoil replacement technique comprising removing a distressed vane from the inner and outer bands so that a stub of the original airfoil remains. A new airfoil is welded to the stubs on the salvaged bands. The second repair process described in paragraph 0004 involves replacing one or more airfoils or bands by disassembling a nozzle segment at its braze joints, providing one or more replacement components, and re-brazing the assembly together. Contrary to the Examiner's assertion, the second repair process does not specifically teach salvaging the airfoils while replacing the bands. The admitted prior art discusses replacing airfoils or bands. This does not necessarily mean that only bands are replaced while only airfoils are salvaged.

The Examiner states that claims 1-10 are unpatentable over the admitted prior art for the reasons set forth in Paper No. 6. These reasons are that it would have been obvious to use replacement bands with stubs and weld them to a salvaged airfoil because the admitted prior art allegedly teaches that it is known in the art to 1) weld new airfoils to salvaged bands with stubs and 2) to replace bands. Applicant has previously argued that there is no motivation to

Serial No. 10/014,696

Atty. Docket No. 13DV-13961

combine the teachings of the admitted prior art in the manner suggested by the Examiner. In response to this argument by applicant, the Examiner states that there is motivation to provide the stub on the replacement band because "it is known to make the attachment by using either the stub on the vane or the band." However, applicant respectfully disagrees that the admitted prior art teaches making an attachment using a stub on a vane. The first repair process of the admitted prior art only teaches a stub on a salvaged band. The second repair process teaches replacing one or more airfoils or bands, disassembled at the braze joints, with replacement components. Because the components are disassembled at the original braze joints, the replacement components are the same as the original components. Thus, the second repair process does not provide stubs on the vanes or bands. Therefore, the Examiner's conclusion that it is known to use a stub on either the vane or the band is inaccurate and cannot provide the required motivation for combining the teachings of the admitted prior art.

Here, there is no suggestion or motivation, either in the prior art or in the knowledge generally available in the art, to combine the teachings of the admitted prior art. Furthermore, to combine the teachings of the two repair processes to arrive at the claimed process, one would essentially have to switch which parts are salvaged and which are replaced, as recognized by the Examiner in Paper No. 6. However, to modify the first repair process so that the vanes were salvaged and the band was replaced would essentially render the prior art process unsatisfactory for its intended purpose, which is repairing a turbine nozzle segment in which the airfoil (i.e., the vane) wall does not meet a minimum thickness (see line 6 of paragraph 0004 of the present specification). As stated in MPEP § 2143.01, if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.

Serial No. 10/014,696

Atty. Docket No. 13DV-13961

For the above reasons, it is respectfully submitted that independent claims 1, 3, 5 and 7 are allowable over "Applicant's Admitted Prior Art." Claims 2, 4, 6 and 8-10 depend from claims 1, 3, 5 and 7 and are thus also believed to be allowable.

In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration of the objections and rejections is requested. Allowance of claims 1-10 at an early date is solicited.

Respectfully submitted,

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Date

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